

# Dr. Chrysanthi N. Raftopoulou

## Curriculum Vitae

### Personal Information

Fullname: Chrysanthi N. Raftopoulou  
Date of birth: 02 March 1984  
Citizenship: Greek

### Contact Details

School of Applied Mathematics and Physical Sciences  
National Technical University of Athens  
Iroon Polytexneiou 9, 15780, Zografou-Athens, Greece  
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### Current Position

2018 – today Postdoctoral Researcher  
Algorithmic Application and Logic Laboratory  
School of Applied Mathematical and Physical Sciences  
National Technical University of Athens

### Education

2008 – 2016 Ph.D., National Technical Univ. of Athens  
Thesis: Colorings, Embeddings and Related Graph Theoretic Problems  
Advisor: Prof. A. Papaioannou  
[https://1drv.ms/b/s!ApYnUQkneLU3giRph8gs\\_guU\\_gK9?e=iX90oB](https://1drv.ms/b/s!ApYnUQkneLU3giRph8gs_guU_gK9?e=iX90oB)  
2007 – 2009 M.Sc. in Applied Mathematical and Physical Sciences, National Technical Univ. of Athens  
2001 – 2007 B.S. in Applied Mathematical and Physical Sciences, National Technical Univ. of Athens

### Foreign Languages

English: Proficiency  
French: Sorbonne 2

### Research Interests

Theoretical aspects of Graph Theory and Computer Science, focusing on Graph Coloring, Graph Drawing and Graph Visualization.

### Research Programs

2021 – 2022 **LILAGR: Linear Layouts of Graphs – Γραμμικές Απεικονίσεις Γραφημάτων**  
Basic Research Support Program ΠΕΒΕ 2020, No 65/229100  
Principal Investigator: Prof. Antonios Symvonis  
National Technical University of Athens  
Postdoctoral Researcher

2018 – 2020 **Book Embeddings and Other Linear Layouts for Beyond-Planar Graphs – Εμφυτεύσεις Γραφημάτων σε Βιβλίο και Λοιπές Γραμμικές Αναπαραστάσεις σχεδόν-Επίπεδων Γραφημάτων**  
Πρόγραμμα προώθησης των ανταλλαγών και της επιστημονικής συνεργασίας Ελλάδας – Γερμανίας IKYDA 2018 – DAAD  
Principal Investigators: Prof. Antonios Symvonis – Prof. Michael Kaufmann  
National Technical University of Athens – University of Tuebingen  
Postdoctoral Researcher

## Program Committees

- GD 2021: **29th International Symposium on Graph Drawing and Network Visualization**  
Tübingen, Germany, September 15-17, 2021
- EuroCG 2022: **38th European Workshop on Computational Geometry**  
Perugia, Italy, March 14-16 2022
- WALCOM 2023: **17th International Conference and Workshops on Algorithms and Computation**  
Hsinchu, Taiwan, March 22-24, 2023

## Refereeing

- Conferences: CIAC, GD, IISA, ISAAC, SODA, STACS, ESA
- Journals: Discrete Mathematics, J. of Graph Algorithms and Applications, Theoretical Computer Science, SIAM J. on Discrete Mathematics, The Computer Journal, Europ. J. of Combinatorics, Comp. Geometry: Theory and Applications

## Invited Research Seminars - Workshops

- **Summer Workshop on Graph Drawing (SWG D) 2022**: September 1-6, 2022, Caldana, Italy
- **Graph and Network Visualization Workshop (GNV) 2022**: June 26- July 1, 2022, Heiligkreuztal, Germany
- **Bertinoro Workshop on Graph Drawing (BWGD) 2022**: March 6-11, 2022, Bertinoro, Italy
- **Graph and Network Visualization Workshop (GNV) 2019**: June 30-July 5, 2019, Heiligkreuztal, Germany
- **Bertinoro Workshop on Graph Drawing (BWGD) 2019**: March 3-8, 2019, Bertinoro, Italy
- **Graph and Network Visualization Workshop (GNV) 2018**: July 1- 6, 2018, Heiligkreuztal, Germany
- **Bertinoro Workshop on Graph Drawing (BWGD) 2018**: March 4-9, 2018, Bertinoro, Italy
- **Graph and Network Visualization Workshop (GNV) 2017**: June 25-30, 2017, Heiligkreuztal, Germany
- **Bertinoro Workshop on Graph Drawing (BWGD) 2017**: March 5-10, 2017, Bertinoro, Italy
- **Graph and Network Visualization Workshop (GNV) – IISA 2016**: June 26- July 1, 2016, Halkidiki, Greece
- **Dagstuhl Seminar 21293**: *Parameterized Complexity in Graph Drawing*, July 18-23, 2021
- **Dagstuhl Seminar 21152**: *Multi-Level Graph Representation for Big Data Arising in Science Mapping*, April 11-16, 2021
- **Dagstuhl Seminar 19092**: *Beyond-Planar Graphs: Combinatorics, Models and Algorithms*, February 24-March 1, 2019
- **Dagstuhl Seminar 16452**: *Beyond Planar Graphs: Algorithmics and Combinatorics*, December 6-11, 2016

## Working Experience

- 2017 – 2021 **iRead: Infrastructure and integrated tools for personalized learning of reading skill**  
European Union Research and Innovation (Horizon 2020) No 731724  
software developer
- 2014 – 2015 **iLearnRW: Integrated Intelligent Learning Environment for Reading and Writing**  
European Union Seventh Framework program (FP7)  
software developer

## Teaching Experience

- Graph Theory (School of Applied Mathematics and Physical Sciences, NTUA)  
teaching: 2017-18  
teaching assistant: 2015-16, 2016-17
- Introduction to Programming (School of Applied Mathematics and Physical Sciences, NTUA)  
laboratory assistant: 2011-12 to 2017-18

- Design and Analysis of Applications in Computer Science (School of Applied Mathematics and Physical Sciences, NTUA)  
laboratory assistant: 2011-12 to 2017-18
- Graph Drawing (Graduate course, Applied Mathematical Sciences, NTUA)  
teaching assistant: 2019-20
- Numerical Analysis I (School of Applied Mathematics and Physical Sciences, NTUA)  
laboratory assistant: 2013-14, 2014-15

### Research Output (Source: Scopus)

Conferences: 19 (STOC, ESA, GD, SoCG, STACS, WG)  
 Journals: 10 (SIAM J. on Computing, Algorithmica, Discrete Mathematics, J. of Computational Geometry, J. of Graph Algorithms and Applications)  
 Citations: 120 (excl. self-citations)  
 h-Index: 7

### Publications: International Journals

<https://idrv.ms/u/s!ApYnUOkneLU3ggR3iKE7N3jwBSN2?e=Ya8uDq>

- [j10] Laura Benton, Manolis Mavrikis, Asimina Vasalou, Nelly Joye, Emma Sumner, Elisabeth Herbert, Andrea Révész, Antonios Symvonis, Chrysanthi N. Raftopoulou: **Designing for "challenge" in a large-scale adaptive literacy game for primary school children**. Br. J. Educ. Technol. 52(5): 1862-1880 (2021)
- [j09] Michael Kaufmann, Jan Kratochvíl, Fabian Lipp, Fabrizio Montecchiani, Chrysanthi N. Raftopoulou, Pavel Valtr: **The Stub Resolution of 1-planar Graphs**. J. Graph Algorithms Appl. 25(2): 625-642 (2021)
- [j08] Michael A. Bekos, Michael Kaufmann, Fabian Klute, Sergey Pupyrev, Chrysanthi N. Raftopoulou, Torsten Ueckerdt: **Four Pages Are Indeed Necessary for Planar Graphs**. J. Comput. Geom. 11(1): 332-353 (2020)
- [j07] Michael A. Bekos, Emilio Di Giacomo, Walter Didimo, Giuseppe Liotta, Fabrizio Montecchiani, Chrysanthi N. Raftopoulou: **Edge partitions of optimal 2-plane and 3-plane graphs**. Discret. Math. 342(4): 1038-1047 (2019)
- [j06] Michael A. Bekos, Henry Förster, Martin Gronemann, Tamara Mchedlidze, Fabrizio Montecchiani, Chrysanthi N. Raftopoulou, Torsten Ueckerdt: **Planar Graphs of Bounded Degree Have Bounded Queue Number**. SIAM J. Comput. 48(5): 1487-1502 (2019)
- [j05] Michael A. Bekos, Till Bruckdorfer, Michael Kaufmann, Chrysanthi N. Raftopoulou: **The Book Thickness of 1-Planar Graphs is Constant**. Algorithmica 79(2): 444-465 (2017)
- [j04] Patrizio Angelini, Michael A. Bekos, Felice De Luca, Walter Didimo, Michael Kaufmann, Stephen G. Kobourov, Fabrizio Montecchiani, Chrysanthi N. Raftopoulou, Vincenzo Roselli, Antonios Symvonis: **Vertex-Coloring with Defects**. J. Graph Algorithms Appl. 21(3): 313-340 (2017)
- [j03] Michael A. Bekos, Martin Gronemann, Chrysanthi N. Raftopoulou: **Two-Page Book Embeddings of 4-Planar Graphs**. Algorithmica 75(1): 158-185 (2016)
- [j02] Michael A. Bekos, Chrysanthi N. Raftopoulou: **On a conjecture of Lovász on circle-representations of simple 4-regular planar graphs**. J. Comput. Geom. 6(1): 1-20 (2015)
- [j01] A. Papaioannou, Chrysanthi N. Raftopoulou: **On the AVDTC of 4-regular graphs**. Discret. Math. 330: 20-40 (2014)

### Publications: International Conferences

<https://idrv.ms/u/s!ApYnUOkneLU3ggPDnUbWqgMvh3jK?e=TZca82>

- [c21] Steven Chaplick, Emilio Di Giacomo, Fabrizio Frati, Robert Ganian, Chrysanthi N. Raftopoulou, Kirill Simonov: **Testing Upward Planarity of Partial 2-Trees**. Graph Drawing 2022: *accepted paper*

- [c20] Michael Bekos, Giordano Da Lozzo, Fabrizio Frati, Martin Gronemann, Tamara Mchedlidze, [Chrysanthi N. Raftopoulou](#): **Recognizing DAGs with Page-Number 2 is NP-complete**. Graph Drawing 2022: *accepted paper*
- [c19] Steven Chaplick, Emilio Di Giacomo, Fabrizio Frati, Robert Ganian, [Chrysanthi N. Raftopoulou](#), Kirill Simonov: **Parameterized Algorithms for Upward Planarity**. SoCG 2022: 26:1-26:16
- [c18] Henry Förster, Michael Kaufmann, [Chrysanthi N. Raftopoulou](#): **Recognizing and Embedding Simple Optimal 2-Planar Graphs**. Graph Drawing 2021: 87-100
- [c17] Michael A. Bekos, Martin Gronemann, [Chrysanthi N. Raftopoulou](#): **On the Queue Number of Planar Graphs**. Graph Drawing 2021: 271-284
- [c16] Michael A. Bekos, Giordano Da Lozzo, Svenja Griesbach, Martin Gronemann, Fabrizio Montecchiani, [Chrysanthi N. Raftopoulou](#): **Book Embeddings of Nonplanar Graphs with Small Faces in Few Pages**. SoCG 2020: 16:1-16:17
- [c15] Therese Biedl, Steven Chaplick, Michael Kaufmann, Fabrizio Montecchiani, Martin Nöllenburg, [Chrysanthi N. Raftopoulou](#): **Layered Fan-Planar Graph Drawings**. MFCS 2020: 14:1-14:13
- [c14] Michael Kaufmann, Jan Kratochvíl, Fabian Lipp, Fabrizio Montecchiani, [Chrysanthi N. Raftopoulou](#), Pavel Valtr: **The Stub Resolution of 1-Planar Graphs**. WALCOM 2020: 170-182
- [c13] Nick Deligiannis, Dionysis Panagiotopoulos, Panagiotis Patsilinakos, [Chrysanthi N. Raftopoulou](#), Antonios Symvonis: **Interactive and Personalized Activity eBooks for Learning to Read: The iRead Case**. iTextbooks@AIED 2019: 57-69
- [c12] Manolis Mavrikis, Asimina Vasalou, Laura Benton, [Chrysanthi N. Raftopoulou](#), Antonios Symvonis, Kostas Karpouzis, Drew Wilkins: **Towards Evidence-informed Design Principles for Adaptive Reading Games**. CHI Extended Abstracts 2019
- [c11] Michael A. Bekos, Henry Förster, Martin Gronemann, Tamara Mchedlidze, Fabrizio Montecchiani, [Chrysanthi N. Raftopoulou](#), Torsten Ueckerdt: **Planar graphs of bounded degree have bounded queue number**. STOC 2019: 176-184
- [c10] Michael Kaufmann, Jan Kratochvíl, Fabian Lipp, Fabrizio Montecchiani, [Chrysanthi N. Raftopoulou](#), Pavel Valtr: **Bounded Stub Resolution for Some Maximal 1-Planar Graphs**. CALDAM 2018: 214-220
- [c09] Evmorfia N. Argyriou, Sabine Cornelsen, Henry Förster, Michael Kaufmann, Martin Nöllenburg, Yoshio Okamoto, [Chrysanthi N. Raftopoulou](#), Alexander Wolff: **Orthogonal and Smooth Orthogonal Layouts of 1-Planar Graphs with Low Edge Complexity**. Graph Drawing 2018: 509-523
- [c08] Michael A. Bekos, Emilio Di Giacomo, Walter Didimo, Giuseppe Liotta, Fabrizio Montecchiani, [Chrysanthi N. Raftopoulou](#): **Edge Partitions of Optimal 2-plane and 3-plane Graphs**. WG 2018: 27-39
- [c07] Michael A. Bekos, Michael Kaufmann, [Chrysanthi N. Raftopoulou](#): **On Optimal 2- and 3-Planar Graphs**. SoCG 2017: 16:1-16:16
- [c06] Michael A. Bekos, Michael Kaufmann, [Chrysanthi N. Raftopoulou](#): **On the Density of Non-simple 3-Planar Graphs**. Graph Drawing 2016: 344-356
- [c05] Michael A. Bekos, Michael Kaufmann, [Chrysanthi N. Raftopoulou](#): **AVDTC of generalized 3-Halin graphs**. IISA 2016: 1-6
- [c04] Michael A. Bekos, Till Bruckdorfer, Michael Kaufmann, [Chrysanthi N. Raftopoulou](#): **1-Planar Graphs have Constant Book Thickness**. ESA 2015: 130-141
- [c03] Michael A. Bekos, Martin Gronemann, Sergey Pupyrev, [Chrysanthi N. Raftopoulou](#): **Perfect smooth orthogonal drawings**. IISA 2014: 76-81
- [c02] Michael A. Bekos, Martin Gronemann, [Chrysanthi N. Raftopoulou](#): **Two-Page Book Embeddings of 4-Planar Graphs**. STACS 2014: 137-148
- [c01] Michael A. Bekos, [Chrysanthi N. Raftopoulou](#): **Circle-Representations of Simple 4-Regular Planar Graphs**. Graph Drawing 2012: 138-149